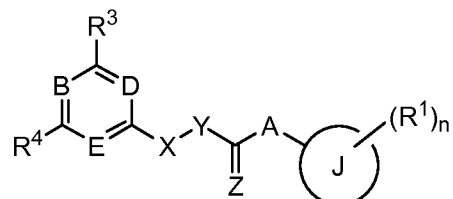


Amendments to the Specification

Please paragraphs [0022] to [0064] of the specification as filed with the following amended paragraphs:

[0022] Embodiment [0022]: The present invention comprises a compound for modulating p70S6K activity according to Formula I,



or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein,

B, D, and E are each independently either =N- or =C(R²)-, provided at least one of B, D, and E is =N-;

at each occurrence, each of R¹, R², and R³ is independently selected from -H, halogen, trihalomethyl, -CN, -NO₂, -OR⁵, -N(R⁵)OR⁵, -ON(R⁵)R⁵, -N(R⁵)N(R⁵)R⁵, -N(R⁵)R⁵, -S(O)₀₋₂R⁵, -SO₂N(R⁵)R⁵, -CO₂R⁵, -C(O)N(R⁵)R⁵, -N(R⁵)SO₂R⁵, -N(R⁵)C(O)R⁵, -N(R⁵)CO₂R⁵, -C(O)R⁵, -C(=NR⁷)N(R⁵)R⁵, -C(=NR⁷)R⁵, -C(=NR⁷)OR⁵, -N(R⁵)C(=NR⁷)N(R⁵)R⁵, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, and optionally substituted arylalkyl;

n is zero to five;

R⁴ is selected from -H, halogen, -CN, -NO₂, -N(R⁵)OR⁵, -ON(R⁵)R⁵, -N(R⁵)N(R⁵)R⁵, -OR⁵, -N(R⁵)R⁵, -S(O)₀₋₂R⁵, -SO₂N(R⁵)R⁵, -CO₂R⁵, -C(O)N(R⁵)R⁵, -N(R⁵)SO₂R⁵, -N(R⁵)C(O)R⁵, -N(R⁵)CO₂R⁵, -C(O)R⁵, -C(=NR⁷)N(R⁵)R⁵, -C(=NR⁷)R⁵, -C(=NR⁷)OR⁵, -N(R⁵)C(=NR⁷)N(R⁵)R⁵, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, and optionally substituted arylalkyl;

R^2 and R^3 , together with the atom or atoms to which they are attached, can combine to form a three- to seven-membered optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted cycloalkyl;

R^2 and R^4 , together with the atom or atoms to which they are attached, can combine to form a three- to seven-membered optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted cycloalkyl;

each R^5 is independently selected from -H, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted lower arylalkyl, optionally substituted heterocyclyl, optionally substituted lower heterocyclylalkyl, and a single bond to an atom of R^1 ;

two of R^5 , together with the atom or respective atoms to which they are attached, can combine to form an optionally substituted three- to seven-membered heterocyclic;

R^5 and R^6 , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

R^5 and R^7 , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

each of X and Y is independently selected from -C(=O)-, -C(R^6) R^6 -, -O-, -N(R^5)-, -C(=NR⁷)-, and -S(O)₀₋₂-; provided when X is -O- or -N(R^5)-, then Y cannot be -C(H) R^{6a} -, where R^{6a} is -C(R^{20})(R^{21}) R^{22} wherein at least one of R^{20} , R^{21} and R^{22} is selected from phenyl, naphthyl, cyclohexyl, dihydronaphthyl tetrahydronaphthyl, and a five- to six-membered heteroaryl, each optionally substituted;

or X and Y can combine to form either -C(R^6)=C(R^6)- or -C≡C-;

Z is selected from O, S, and a double bond to an atom of R^1 ;

A is either -N(R^5)- or a single bond;

each R^6 is independently selected from -H, halogen, trihalomethyl, -CN, -NO₂, -NH₂, -OR⁵, -N(R^5) R^5 , -S(O)₀₋₂ R^5 , -SO₂N(R^5) R^5 , -CO₂ R^5 , -C(O)N(R^5) R^5 , -N(R^5)SO₂ R^5 , -N(R^5)C(O) R^5 , -N(R^5)CO₂ R^5 , -C(O) R^5 , optionally substituted lower alkyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, optionally substituted arylalkyl, and a single bond to an atom of R^2 of D or E when said either D or E is =C(R^2)-

two of R^6 , together with the atom or atoms to which they are attached, can combine to form one of an optionally substituted three to seven-membered alicyclic, an optionally substituted three to seven-membered heteroalicyclic, and a double bond to an atom of R^2 of D or E when said either D or E is $=C(R^2)-$;

each R^7 is independently selected from -H, -CN, -NO₂, -N(R^5) R^5 , -OR⁵, -S(O)₀₋₂ R^5 , -SO₂N(R^5) R^5 , -CO₂ R^5 , optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, and a single bond to a carbon of J; and

J is selected from an optionally substituted five- to ten-membered aryl and an optionally substituted five- to ten-membered heteroaryl;

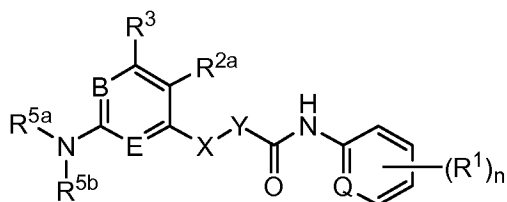
provided the compound is not one of: 2-(2-amino-5-cyano-6-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-(3-trifluoromethyl-phenyl)-acetamide, 2-{{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[3-(butyloxy)phenyl]acetamide, 2-{{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-benzothiazol-2-ylacetamide, 2-{{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide, 2-{{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(4-methyl-1,3-thiazol-2-yl)acetamide, 2-amino-4-{{[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio}-6-(methylthio)pyrimidine-5-carbonitrile, 2-{{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-thiazol-2-ylacetamide, 2-(5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 5-amino-2-methylsulfanyl-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(6-amino-5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 4,5-diamino-2-(2-methoxyethoxy)-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(5-cyano-6-phenyl-2-phenylcarbamoylmethylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, and a 2-(6-amino-3,5-dicyano-pyridin-2-ylsulfanyl)-N-phenyl-acetamide derivative.

[0023] Embodiment [0023]: In one example, the compound is according to ~~paragraph~~ Embodiment [0022], wherein J is either a six-membered aryl or a five- to six-membered heteroaryl.

[0024] Embodiment [0024]: In another example, the compound is according to ~~paragraph~~ Embodiment [0023], wherein D is $=C(R^2)-$.

[0025] Embodiment [0025]: In another example, the compound is according to paragraph Embodiment [0024], wherein R^4 is $-N(R^5)R^5$.

[0026] Embodiment [0026]: In another example, the compound is according to paragraph Embodiment [0025], of Formula II,



II

wherein, R^1 , R^2 , R^3 , R^5 , n , B, E, X, and Y are as defined above; and Q is either $=N-$ or $=C(H)-$.

[0027] Embodiment [0027]: In another example, the compound is according to paragraph Embodiment [0026], wherein R^{2a} is selected from halogen, $-CN$, $-C(=O)N(R^5)R^5$, $-CF_3$, $-CO_2R^5$, $-C(R^5)=C(R^5)R^5$, $-C\equiv C-R^5$, and $-NO_2$;

[0028] Embodiment [0028]: In another example, the compound is according to paragraph Embodiment [0027], wherein at least one of R^{5a} and R^{5b} is $-H$.

[0029] Embodiment [0029]: In another example, the compound is according to paragraph Embodiment [0028], wherein R^3 is selected from $-OR^5$, $-NR^5R^5$, and $-S(O)_{0-2}R^5$.

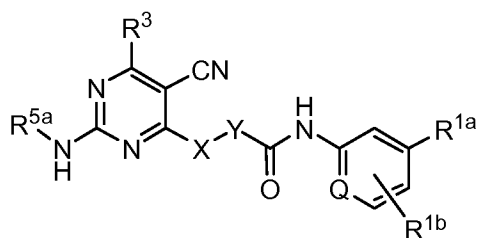
[0030] Embodiment [0030]: In another example, the compound is according to paragraph Embodiment [0029], wherein at least one of B and E is $=N-$.

[0031] Embodiment [0031]: In another example, the compound is according to paragraph Embodiment [0030], wherein R^1 is selected from halogen, $-OR^5$, $-NR^5R^5$, $-S(O)_{0-2}R^5$, $-NO_2$, perhaloalkyl, optionally substituted lower alkyl, optionally substituted aryl, and optionally substituted arylalkyl.

[0032] Embodiment [0032]: In another example, the compound is according to paragraph Embodiment [0031], wherein R^1 is selected from halogen, $-OR^5$, $-NR^5R^5$, $-S(O)_{0-1}R^5$, $-NO_2$, perhaloalkyl, and optionally substituted lower alkyl.

[0033] Embodiment [0033]: In another example, the compound is according to paragraph Embodiment [0032], wherein A is $-N(R^5)-$.

[0034] Embodiment [0034]: In another example, the compound is according to Embodiment paragraph-[0033], of Formula III,



III

wherein, R³, R⁵, X, Y, and Q are as defined above; R^{1a} is selected from halogen, lower perfluoroalkyl, -NO₂, -OR⁵, and optionally substituted C₁₋₄alkyl; and R^{1b} is selected from halogen, -OR⁵, -N(R⁵)R⁵, -SR⁵, perfluoroalkyl, and optionally substituted lower alkyl.

[0035] Embodiment [0035]: In another example, the compound is according to Embodiment paragraph-[0034], wherein R^{1a} is selected from -NO₂, halogen, perfluoroalkyl, haloalkyl, optionally substituted C₁₋₂alkyl, and optionally substituted -O-C₁₋₂alkyl.

[0036] Embodiment [0036]: In another example, the compound is according to Embodiment paragraph-[0035], wherein R³ is selected from optionally substituted -O-C₁₋₄alkyl, -O-C₁₋₄perfluoroalkyl, optionally substituted -N(H)C₁₋₄alkyl, optionally substituted -N(C₁₋₄alkyl)C₁₋₄alkyl, optionally substituted -S(O)₀₋₂-C₁₋₄alkyl, and optionally substituted -S(O)₀₋₂-C₁₋₄perfluoroalkyl.

[0037] Embodiment [0037]: In another example, the compound is according to Embodiment paragraph-[0036], wherein Y is either -N(H)- or -C(R⁶)R⁶-.

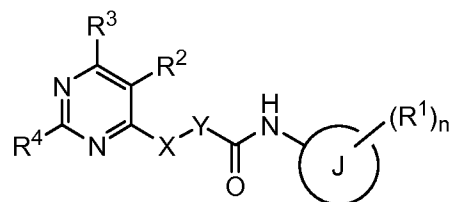
[0038] Embodiment [0038]: In another example, the compound is according to Embodiment paragraph-[0037], wherein X is selected from -O-, -N(R⁵)- and -S-.

[0039] Embodiment [0039]: In another example, the compound is according to Embodiment paragraph-[0038], wherein Y is -C(R⁶)R⁶-; wherein each R⁶ is independently selected from -H, halogen, trihalomethyl, -NH₂, optionally substituted -O-C₁₋₄alkyl, optionally substituted -N(H)C₁₋₄alkyl, optionally substituted -S-C₁₋₄alkyl, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclalkyl.

[0040] Embodiment [0040]: In another example, the compound is according to Embodiment paragraph [0039], wherein Y is $-\text{C}(\text{H})\text{R}^6-$; wherein R^6 is independently selected from -H, halogen, trihalomethyl, $-\text{NH}_2$, optionally substituted $-\text{O}-\text{C}_{1-4}\text{alkyl}$, optionally substituted $-\text{N}(\text{H})\text{C}_{1-4}\text{alkyl}$, optionally substituted $-\text{S}-\text{C}_{1-4}\text{alkyl}$, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclalkyl.

[0041] Embodiment [0041]: In another example, the compound is according to Embodiment paragraph [0040], wherein Q is $=\text{C}(\text{H})-$.

[0042] Embodiment [0042]: In another example, the present invention comprises a compound for modulating p70S6K activity according to Formula IV,



IV

or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein,

R^1 is selected from halogen, $-\text{OR}^5$, $-\text{N}(\text{R}^5)\text{R}^5$, $-\text{S}(\text{O})_{0-2}\text{R}^5$, $-\text{NO}_2$, $-\text{C}(\text{O})\text{R}^5$, perhaloalkyl, optionally substituted lower alkyl, optionally substituted aryl, and optionally substituted arylalkyl.

n is zero to five;

R^2 is selected from halogen, $-\text{CN}$, $-\text{C}(=\text{O})\text{N}(\text{R}^5)\text{R}^5$, $-\text{CF}_3$, $-\text{CO}_2\text{R}^5$, $-\text{C}(\text{R}^5)=\text{C}(\text{R}^5)\text{R}^5$, $-\text{C}\equiv\text{C}-\text{R}^5$, and $-\text{NO}_2$;

R^3 is selected from -H, halogen, trihalomethyl, $-\text{CN}$, $-\text{NO}_2$, $-\text{OR}^5$, $-\text{N}(\text{R}^5)\text{OR}^5$, $-\text{ON}(\text{R}^5)\text{R}^5$, $-\text{N}(\text{R}^5)\text{N}(\text{R}^5)\text{R}^5$, $-\text{N}(\text{R}^5)\text{R}^5$, $-\text{S}(\text{O})_{0-2}\text{R}^5$, $-\text{SO}_2\text{N}(\text{R}^5)\text{R}^5$, $-\text{CO}_2\text{R}^5$, $-\text{C}(\text{O})\text{N}(\text{R}^5)\text{R}^5$, $-\text{N}(\text{R}^5)\text{SO}_2\text{R}^5$, $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{R}^5$, $-\text{N}(\text{R}^5)\text{CO}_2\text{R}^5$, $-\text{C}(\text{O})\text{R}^5$, $-\text{C}(=\text{NR}^7)\text{N}(\text{R}^5)\text{R}^5$, $-\text{C}(=\text{NR}^7)\text{R}^5$, $-\text{C}(=\text{NR}^7)\text{OR}^5$, $-\text{N}(\text{R}^5)\text{C}(=\text{NR}^7)\text{N}(\text{R}^5)\text{R}^5$, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclalkyl, and optionally substituted arylalkyl;

R^4 is selected from $-\text{CN}$, halogen, $-\text{NO}_2$, $-\text{N}(\text{R}^5)\text{OR}^5$, $-\text{ON}(\text{R}^5)\text{R}^5$, $-\text{N}(\text{R}^5)\text{N}(\text{R}^5)\text{R}^5$, $-\text{OR}^5$, $-\text{N}(\text{R}^5)\text{R}^5$, $-\text{SO}_2\text{N}(\text{R}^5)\text{R}^5$, $-\text{C}(\text{O})\text{N}(\text{R}^5)\text{R}^5$, $-\text{C}(=\text{NR}^7)\text{N}(\text{R}^5)\text{R}^5$, $-\text{C}(=\text{NR}^7)\text{R}^5$, $-\text{C}(=\text{NR}^7)\text{OR}^5$,

$-\text{N}(\text{R}^5)\text{C}(=\text{NR}^7)\text{N}(\text{R}^5)\text{R}^5$, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclalkyl;

each R^5 is independently selected from $-\text{H}$, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted lower arylalkyl, optionally substituted heterocyclyl, and optionally substituted lower heterocyclalkyl;

two of R^5 , together with the atom or respective atoms to which they are attached, can combine to form an optionally substituted three- to seven-membered heterocyclic;

R^5 and R^6 , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

R^5 and R^7 , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

each of X and Y is independently selected from $-\text{C}(=\text{O})-$, $-\text{C}(\text{R}^6)\text{R}^6-$, $-\text{O}-$, $-\text{N}(\text{R}^5)-$, $-\text{C}(=\text{NR}^7)-$, and $-\text{S}(\text{O})_{0-2}-$; provided when X is $-\text{O}-$ or $-\text{N}(\text{R}^5)-$, then Y cannot be $-\text{C}(\text{H})\text{R}^{6a}-$, where R^{6a} is $-\text{C}(\text{R}^{20})(\text{R}^{21})\text{R}^{22}$ wherein at least one of R^{20} , R^{21} and R^{22} is selected from phenyl, naphthyl, cyclohexyl, dihydronaphthyl tetrahydronaphthyl, and a five- to six-membered heteroaryl, each optionally substituted;

or X and Y can combine to form either $-\text{C}(\text{R}^6)=\text{C}(\text{R}^6)-$ or $-\text{C}\equiv\text{C}-$;

each R^6 is independently selected from $-\text{H}$, halogen, trihalomethyl, $-\text{CN}$, $-\text{NO}_2$, $-\text{NH}_2$, $-\text{OR}^5$, $-\text{N}(\text{R}^5)\text{R}^5$, $-\text{S}(\text{O})_{0-2}\text{R}^5$, $-\text{SO}_2\text{N}(\text{R}^5)\text{R}^5$, $-\text{CO}_2\text{R}^5$, $-\text{C}(\text{O})\text{N}(\text{R}^5)\text{R}^5$, $-\text{N}(\text{R}^5)\text{SO}_2\text{R}^5$, $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{R}^5$, $-\text{N}(\text{R}^5)\text{CO}_2\text{R}^5$, $-\text{C}(\text{O})\text{R}^5$, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclalkyl, optionally substituted arylalkyl, and a single bond to an atom of R^1 ;

two of R^6 , together with the atom or atoms to which they are attached, can combine to form either an optionally substituted three to seven-membered alicyclic or an optionally substituted three to seven-membered heteroalicyclic;

each R^7 is independently selected from $-\text{H}$, $-\text{CN}$, $-\text{NO}_2$, $-\text{N}(\text{R}^5)\text{R}^5$, $-\text{OR}^5$, $-\text{S}(\text{O})_{0-2}\text{R}^5$, $-\text{SO}_2\text{N}(\text{R}^5)\text{R}^5$, $-\text{CO}_2\text{R}^5$, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, and a single bond to a carbon of J; and

J is selected from an optionally substituted five- to ten-membered aryl and an optionally substituted five- to ten-membered heteroaryl;

provided the compound is not one of: 2-(2-amino-5-cyano-6-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-(3-trifluoromethyl-phenyl)-acetamide, 2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-[3-(butyloxy)phenyl]acetamide, 2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-1,3-benzothiazol-2-ylacetamide, 2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide, 2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-(4-methyl-1,3-thiazol-2-yl)acetamide, 2-amino-4-{{2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl}thio}-6-(methylthio)pyrimidine-5-carbonitrile, 2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-1,3-thiazol-2-ylacetamide, 2-(5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 5-amino-2-methylsulfanyl-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(6-amino-5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 4,5-diamino-2-(2-methoxyethoxy)-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(5-cyano-6-phenyl-2-phenylcarbamoylmethylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, and a 2-(6-amino-3,5-dicyano-pyridin-2-ylsulfanyl)-N-phenyl-acetamide derivative.

[0043] Embodiment [0043]: In another example, the compound is according to Embodiment paragraph-[0042], wherein R^4 is $-NR^{5a}R^{5b}$; wherein at least one of R^{5a} and R^{5b} is $-H$.

[0044] Embodiment [0044]: In another example, the compound is according to Embodiment paragraph-[0043], wherein X is selected from $-O-$, $-N(R^5)-$, and $-S(O)_{0-2}-$.

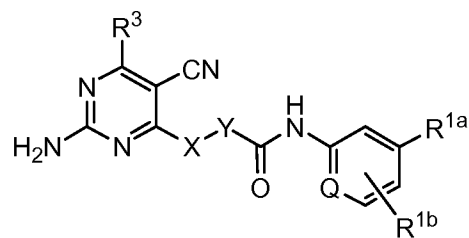
[0045] Embodiment [0045]: In another example, the compound is according to Embodiment paragraph-[0044], wherein Y is either $-C(R^6)R^6-$ or $-N(R^5)-$.

[0046] Embodiment [0046]: In another example, the compound is according to Embodiment paragraph-[0045], wherein J is either phenyl or pyridyl.

[0047] Embodiment [0047]: In another example, the compound is according to Embodiment paragraph-[0046], wherein R^4 is $-NH_2$.

[0048] Embodiment [0048]: In another example, the compound is according to Embodiment paragraph-[0047], wherein at least one of R^1 is selected from halo, $-NO_2$, $-OR^5$, perfluoroalkyl, haloalkyl, and optionally substituted C_{1-4} alkyl.

[0049] Embodiment [0049]: In another example, the compound is according to Embodiment paragraph-[0048], of Formula V,



V

wherein R^1 , R^3 , X, and Y are as defined above; and Q is either =N- or =C(H)-.

[0050] Embodiment [0050]: In another example, the compound is according to Embodiment paragraph-[0049], wherein R^{1a} is selected from halo, lower perfluoroalkyl, $-NO_2$, optionally substituted $-O-C_{1-4}alkyl$, and optionally substituted $C_{1-4}alkyl$.

[0051] Embodiment [0051]: In another example, the compound is according to Embodiment paragraph-[0050], wherein R^3 is selected from optionally substituted $-O-C_{1-4}alkyl$, $-O-C_{1-4}perfluoroalkyl$, optionally substituted $-N(H)C_{1-4}alkyl$, optionally substituted $-N(C_{1-4}alkyl)C_{1-4}alkyl$, optionally substituted $-S(O)_{0-2}-C_{1-4}alkyl$, and optionally substituted $-S(O)_{0-2}-C_{1-4}perfluoroalkyl$.

[0052] Embodiment [0052]: In another example, the compound is according to Embodiment paragraph-[0051], wherein Y is $-C(R^6)R^6$; wherein each R^6 is independently selected from -H, halogen, trihalomethyl, $-NH_2$, optionally substituted $-O-C_{1-4}alkyl$, optionally substituted $-N(H)C_{1-4}alkyl$, optionally substituted $-S-C_{1-4}alkyl$, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.

[0053] Embodiment [0053]: In another example, the compound is according to Embodiment paragraph-[0052], wherein Y is $-C(H)R^6$; wherein R^6 is independently selected from -H, halogen, trihalomethyl, $-NH_2$, optionally substituted $-O-C_{1-4}alkyl$, optionally substituted $-N(H)C_{1-4}alkyl$, optionally substituted $-S-C_{1-4}alkyl$, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.

[0054] Embodiment [0054]: In another example, the compound is according to Embodiment paragraph-[0053], wherein Q is =C(H)-.

[0055] Embodiment [0055]: In another example, the compound is according to Embodiment paragraph-[0022], selected from

Table 1

Entry	Name	Structure
1	2-[(3-cyano-4,6-dimethyl-5-nitropyridin-2-yl)oxy]-N-[3-(trifluoromethyl)phenyl]acetamide	
2	N-2-(2-amino-6-chloropyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
3	[2-amino-6-(methylthio)pyrimidin-4-yl]methyl [3-(trifluoromethyl)phenyl]carbamate	
4	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[5-(trifluoromethyl)pyridin-2-yl]acetamide	
5	N-2-[2-amino-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
6	2-{[2-amino-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	

Table 1

Entry	Name	Structure
7	2- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio} -N-[3-(methoxy)phenyl]acetamide	
8	N-2-(2-amino-6-morpholin-4-ylpyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
9	2- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio} -N-(4-chlorophenyl)acetamide	
10	2- {[2-amino-6-(1H-1,2,3-benzotriazol-1-yloxy)pyrimidin-4-yl]thio} -N-[3-(trifluoromethyl)phenyl]acetamide	
11	2- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio} -N-(3-chlorophenyl)acetamide	
12	N-2-(2-amino-6-chloro-5-formylpyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	

Table 1

Entry	Name	Structure
13	N-2-[2-amino-5-formyl-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
14	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	
15	2-[(2-amino-6-chloropyrimidin-4-yl)thio]-N-[3-(trifluoromethyl)phenyl]acetamide	
16	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-methyl-N-[3-(trifluoromethyl)phenyl]acetamide	
17	N-2-[4-amino-6-(methylthio)-1,3,5-triazin-2-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
18	N-2-[4-(dimethylamino)-6-(methylthio)-1,3,5-triazin-2-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	

Table 1

Entry	Name	Structure
19	N-2-[4-(methylamino)-6-(methylthio)-1,3,5-triazin-2-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
20	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
21	'2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
22	'2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[3-(butyloxy)phenyl]acetamide	
23	'2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-benzothiazol-2-ylacetamide	
24	'2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide	
25	'2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(4-methyl-1,3-thiazol-2-yl)acetamide	

Table 1

Entry	Name	Structure
26	'2-amino-4-{[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio}-6-(methylthio)pyrimidine-5-carbonitrile	
27	'2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-thiazol-2-ylacetamide	
28	ethyl 5-[({2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio} acetyl)amino]-4-cyano-3-methylthiophene-2-carboxylate	
29	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-pyridin-2-ylacetamide	
30	2-amino-4-({2-[2,5-bis(methoxy)phenyl]-2-oxoethyl} thio)-6-(methylthio)pyrimidine-5-carbonitrile	
31	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[4-fluoro-3-(trifluoromethyl)phenyl]acetamide	

Table 1

Entry	Name	Structure
32	2-[(2,6-diaminopyrimidin-4-yl)thio]-N-[4-fluoro-3-(trifluoromethyl)phenyl]acetamide	
33	2-[(2,6-diaminopyrimidin-4-yl)thio]-N-[3-(trifluoromethyl)phenyl]acetamide	
34	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[4-chloro-3-(trifluoromethyl)phenyl]acetamide	
35	2-amino-4-(methylthio)-6-({2-oxo-1-[3-(trifluoromethyl)phenyl]pyrrolidin-3-yl} thio)pyrimidine-5-carbonitrile	
36	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[6-(trifluoromethyl)pyridin-2-yl]acetamide	
37	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[4-(trifluoromethyl)pyridin-2-yl]acetamide	

Table 1

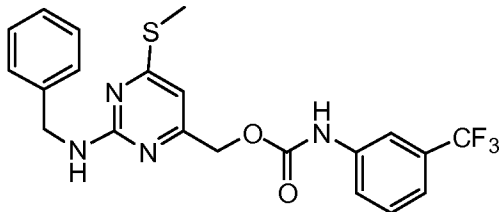
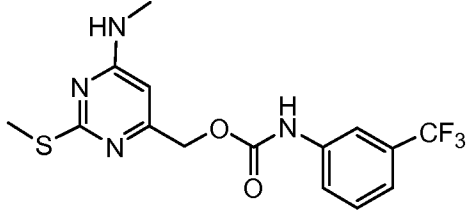
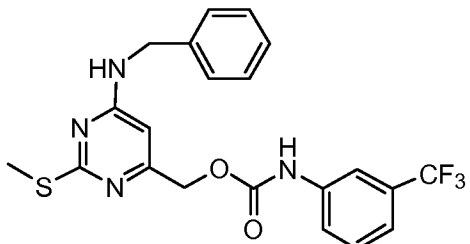
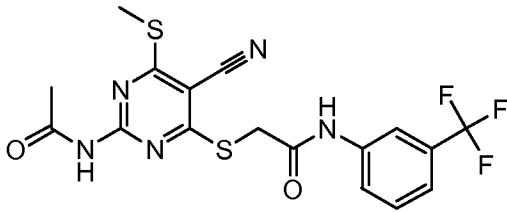
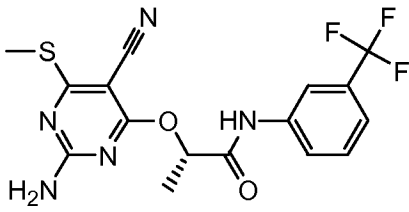
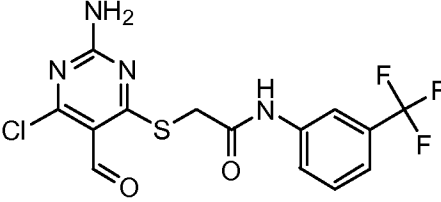
Entry	Name	Structure
38	{6-(methylthio)-2-[(phenylmethyl)amino]pyrimidin-4-yl} methyl [3-(trifluoromethyl)phenyl]carbamate	
39	[6-(methylamino)-2-(methylthio)pyrimidin-4-yl]methyl [3-(trifluoromethyl)phenyl]carbamate	
40	{2-(methylthio)-6-[(phenylmethyl)amino]pyrimidin-4-yl} methyl [3-(trifluoromethyl)phenyl]carbamate	
41	2-{[2-(acetlamino)-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
42	(2S)-2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]propanamide	
43	2-[(2-amino-6-chloro-5-formylpyrimidin-4-yl)thio]-N-[3-(trifluoromethyl)phenyl]acetamide	

Table 1

Entry	Name	Structure
44	N-2-[2-amino-5-(hydroxymethyl)-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
45	2-{[2-amino-5-formyl-6-(methylamino)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
46	2-{[2-amino-5-formyl-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	
47	2-{[4-amino-6-(methylthio)-1,3,5-triazin-2-yl]oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	
48	2-{[2-amino-6-(methylthio)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
49	2-amino-4-(methylthio)-6-{[2-oxo-2-(3-oxo-3,4-dihydro-2H-1,4-benzoxazin-6-yl)ethyl]thio}pyrimidine-5-carbonitrile	
50	2-[(2-amino-6-chloro-5-formylpyrimidin-4-yl)oxy]-N-[3-(trifluoromethyl)phenyl]acetamide	

Table 1

Entry	Name	Structure
51	2- {[2-amino-5-formyl-6-(phenylthio)pyrimidin-4-yl]thio} -N-[3-(trifluoromethyl)phenyl]acetamide	
52	2- {[2-amino-5-(hydroxymethyl)-6-(phenylthio)pyrimidin-4-yl]thio} -N-[3-(trifluoromethyl)phenyl]acetamide	
53	2- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio} -N-[2-methyl-3-(trifluoromethyl)phenyl]acetamide	
54	2- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio} -N-[2-(methyloxy)-5-(trifluoromethyl)phenyl]acetamide	
55	2- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio} -N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide	
56	2- {[2-amino-5-(hydroxymethyl)-6-(methylthio)pyrimidin-4-yl]oxy} -N-[3-(trifluoromethyl)phenyl]acetamide	

Table 1

Entry	Name	Structure
57	N-2-(6-amino-1H-pyrazolo[3,4-d]pyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
58	N-2-[2-amino-5-[(E)-hydrazonomethyl]-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
59	N-2-[2-amino-5-[(E)-(hydroxyimino)methyl]-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
60	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
61	2-{[2-amino-5-cyano-6-(methylamino)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
62	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[2-amino-5-(trifluoromethyl)phenyl]acetamide	

Table 1

Entry	Name	Structure
63	2-amino-4-(methylthio)-6-({[6-(trifluoromethyl)-1H-benzimidazol-2-yl]methyl}thio)pyrimidine-5-carbonitrile	
64	2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
65	N-2-[5-cyano-2-(methylamino)-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
66	2-{[2-amino-5-cyano-6-(dimethylamino)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
67	(S)-1-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]prolinamide	
68	(2R)-2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]propanamide	

Table 1

Entry	Name	Structure
69	1- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy} -N-[3-(trifluoromethyl)phenyl]cyclopropane carboxamide	
70	(2S)-2- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy} -3-methyl-N-[3-(trifluoromethyl)phenyl]butanamide	
71	N-2-[5-cyano-2-(dimethylamino)-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
72	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]glycinamide	
73	1- {[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino} -N-[3-(trifluoromethyl)phenyl]cyclopropane carboxamide	
74	N-2-[2-amino-5-cyano-6-(methylsulfinyl)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	

Table 1

Entry	Name	Structure
75	N-2-[2-amino-5-cyano-6-(methylsulfonyl)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
76	N-2-(5-cyano-2-morpholin-4-ylpyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
77	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[3,5-bis(trifluoromethyl)phenyl]acetamide	
78	N-2-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
79	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[2-(methyloxy)-5-(trifluoromethyl)phenyl]-L-alaninamide	
80	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[2-chloro-5-(trifluoromethyl)phenyl]-L-alaninamide	

Table 1

Entry	Name	Structure
81	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-2-methyl-N-[3-(trifluoromethyl)phenyl]alaninamide	
82	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-{3-[(4-methylpiperazin-1-yl)carbonyl]phenyl}-L-alaninamide	
83	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-D-alaninamide	
84	2-[(2-amino-5-cyano-6-morpholin-4-yl)pyrimidin-4-ylthio]-N-[3-(trifluoromethyl)phenyl]acetamide	
85	(R)-1-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]prolinamide	
86	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	

Table 1

Entry	Name	Structure
87	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-[2-(dimethylamino)ethyl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
88	N-2-[2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
89	N-2-(2,6-diamino-5-cyanopyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
90	N-2-(2-amino-5-cyanopyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
91	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
92	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-{[2-(diethylamino)ethyl]oxy}phenyl)-L-alaninamide	

Table 1

Entry	Name	Structure
93	2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-1,2-dimethyl-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
94	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-amino-5-(trifluoromethyl)phenyl]-L-alaninamide	
95	ethyl [1-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-2-({[3-(trifluoromethyl)phenyl]amino}carbonyl)hydrazino]acetate	
96	2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-2-methyl-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
97	3,5-diamino-4,6-dimethyl-N-[3-(trifluoromethyl)phenyl]furo[2,3-b]pyridine-2-carboxamide	
98	3-amino-4,6-dimethyl-5-nitro-N-[3-(trifluoromethyl)phenyl]furo[2,3-b]pyridine-2-carboxamide	

Table 1

Entry	Name	Structure
99	N-2-(2-amino-5-cyano-6-hydroxypyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
100	N-2-[5-cyano-2-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
101	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-(tetrahydro-2H-pyran-4-ylmethyl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
102	N-2-(2-amino-5-cyano-6-{[2-(dimethylamino)ethyl]oxy}pyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
103	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-6-{[(1,1-dimethylethyl)oxy]carbonyl}-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	
104	2-amino-4-(methylthio)-6-(methyl{(1S)-1-[6-(trifluoromethyl)-1H-benzimidazol-2-yl]ethyl}amino)pyrimidine-5-carbonitrile	

Table 1

Entry	Name	Structure
105	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-[2-(tetrahydro-2H-pyran-4-yl)ethyl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
106	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-{[2-(diethylamino)ethyl]amino}-5-(trifluoromethyl)phenyl]-L-alaninamide	
107	2-amino-4-(methylthio)-6-(((1S)-1-[6-(trifluoromethyl)-1H-benzimidazol-2-yl]ethyl)amino)pyrimidine-5-carbonitrile	
108	2-{2-amino-5-cyano-6-[1-(3-trifluoromethyl-phenylcarbamoyl)-1S-ethylamino]-pyrimidin-4-ylamino}-N-(3-trifluoromethyl-phenyl)-2S-propionamide	
109	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-(3-methylphenyl)glycinamide	
110	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-[3-(1-methylethyl)phenyl]glycinamide	

Table 1

Entry	Name	Structure
111	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-5-[imino(nitroamino)methyl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
112	methyl 3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl}amino)-5-(trifluoromethyl)benzoate	
113	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-nitrophenyl)-L-alaninamide	
114	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	
115	N-2-[2-amino-5-cyano-6-(propyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
116	N-2-[5-cyano-2-{[2-(methyloxy)ethyl]amino}-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	

Table 1

Entry	Name	Structure
117	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-argininamide	
118	N-2-[2-amino-5-cyano-6-(methylsulfinyl)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
119	N-2-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
120	N-2-[2-amino-5-cyano-6-(propyloxy)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
121	N-2-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
122	N-2-[2-amino-5-cyano-6-[(1-methylethyl)oxy]pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	

Table 1

Entry	Name	Structure
123	N-5-acetyl-N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
124	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-aminophenyl)-L-alaninamide	
125	3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl}amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	
126	2-(methoxy)ethyl ((4S)-4-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino)-5-oxo-5-([3-(trifluoromethyl)phenyl]amino)pentyl)carbamate	
127	2-[2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
128	1,1-dimethylethyl ((4S)-4-([2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]amino)-5-oxo-5-([3-(trifluoromethyl)phenyl]amino)pentyl)carbamate	

Table 1

Entry	Name	Structure
129	N-2-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
130	3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-methyl-L-alanyl}amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	
131	3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-methyl-L-alanyl}amino)-N-[3-(4-methylpiperazin-1-yl)propyl]-5-(trifluoromethyl)benzamide	
132	N~2~-2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~2~-methyl-N-[3-[(trifluoromethyl)oxy]phenyl]-L-alaninamide	

Table 1

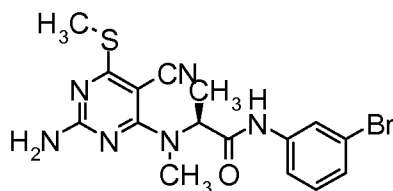
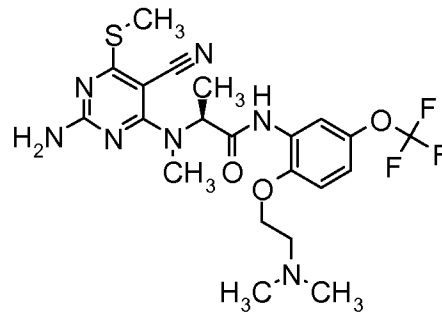
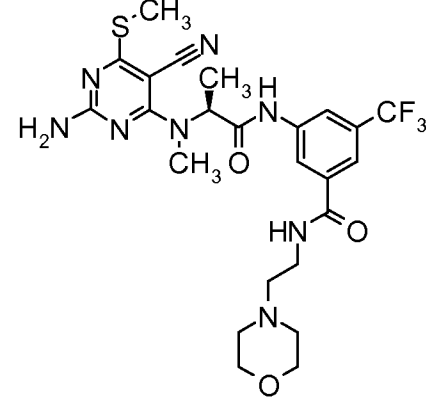
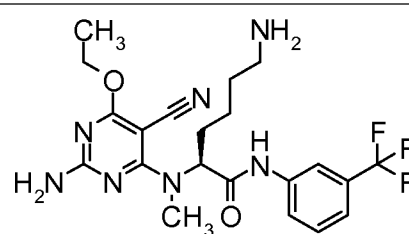
Entry	Name	Structure
133	N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-bromophenyl)-N~2~-methyl-L-alaninamide	 <p>Chiral</p>
134	N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-{2-[[2-(dimethylamino)ethyl]oxy]-5-[(trifluoromethyl)oxy]phenyl}-N~2~-methyl-L-alaninamide	 <p>Chiral</p>
135	3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-methyl-L-alanyl}amino)-N-(2-morpholin-4-ylethyl)-5-(trifluoromethyl)benzamide	 <p>Chiral</p>
136	N~2~-[2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]-N~2~-methyl-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	 <p>Chiral</p>

Table 1

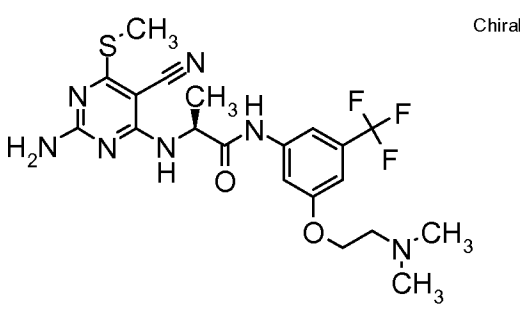
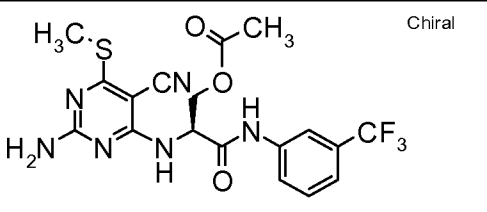
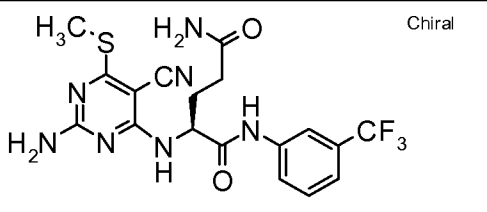
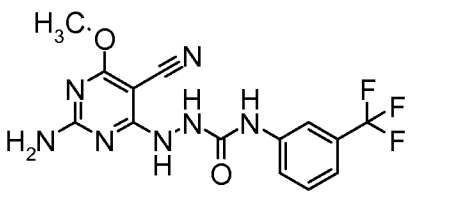
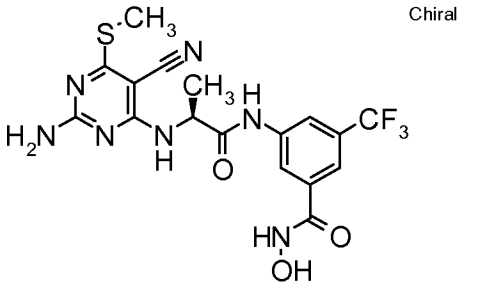
Entry	Name	Structure
137	N~2~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N-[3-{[2-(dimethylamino)ethyl]oxy}-5-(trifluoromethyl)phenyl]-L-alaninamide	
138	(2S)-2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino}-3-oxo-3-{[3-(trifluoromethyl)phenyl]amino}propyl acetate	
139	N~2~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N~1~-{3-(trifluoromethyl)phenyl}-L-glutamamide	
140	2-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
141	3-{[N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl]amino}-N-hydroxy-5-(trifluoromethyl)benzamide	

Table 1

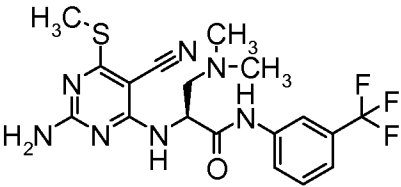
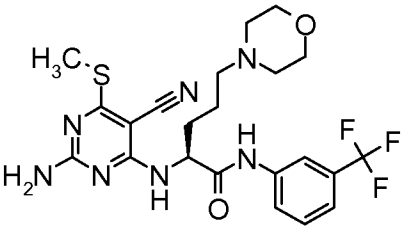
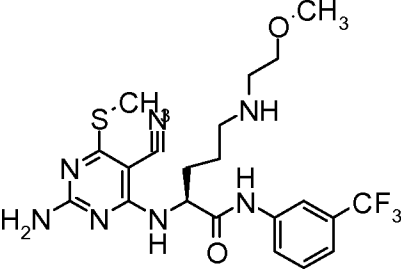
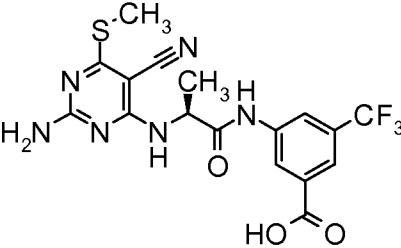
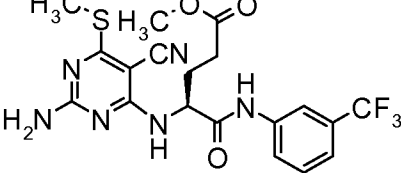
Entry	Name	Structure
142	N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-3-(dimethylamino)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
143	N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-5-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-norvalinamide	
144	N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~5~-[2-(methyloxy)ethyl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
145	3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl}amino)-5-(trifluoromethyl)benzoic acid	
146	methyl N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	

Table 1

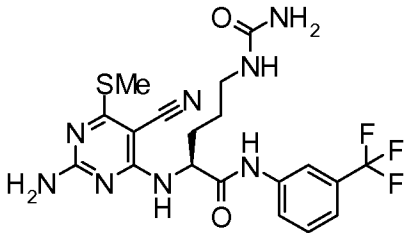
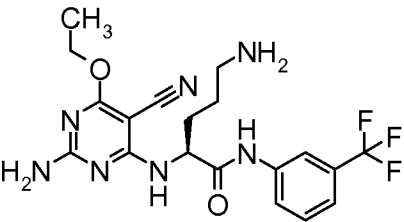
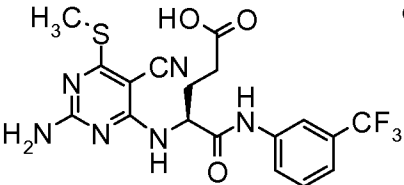
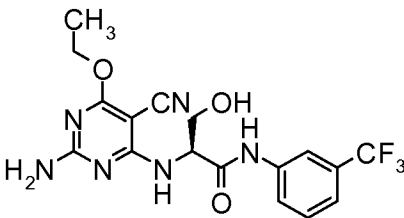
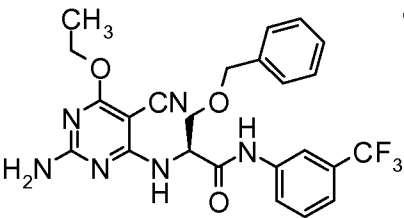
Entry	Name	Structure
147	N~5~-((aminocarbonyl)-N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
148	N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
149	N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamine	
150	N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-serinamide	
151	N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-O-(phenylmethyl)-N-[3-(trifluoromethyl)phenyl]-L-serinamide	

Table 1

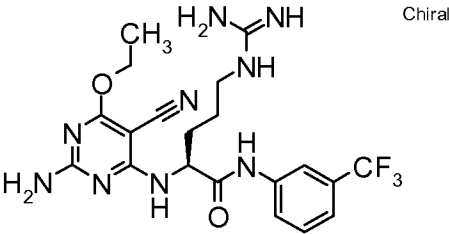
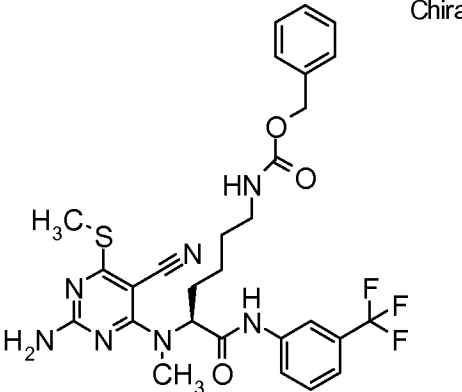
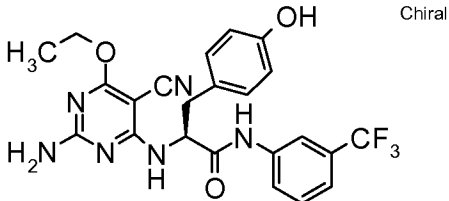
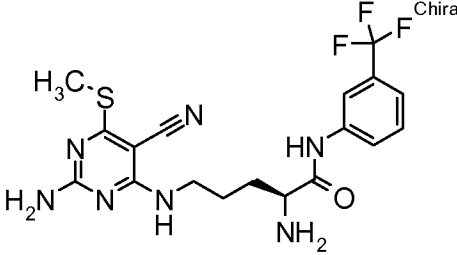
Entry	Name	Structure
152	N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-argininamide	
153	N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~2~-methyl-N~6~-{[(phenylmethyl)oxy]carbonyl}-N-[3-(trifluoromethyl)phenyl]-L-lysινamide	
154	Nalpha-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-tyrosinamide	
155	N~5~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	

Table 1

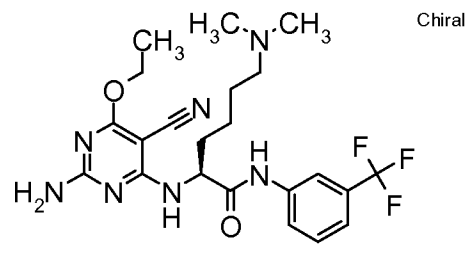
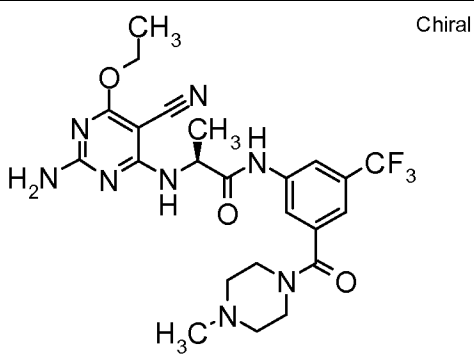
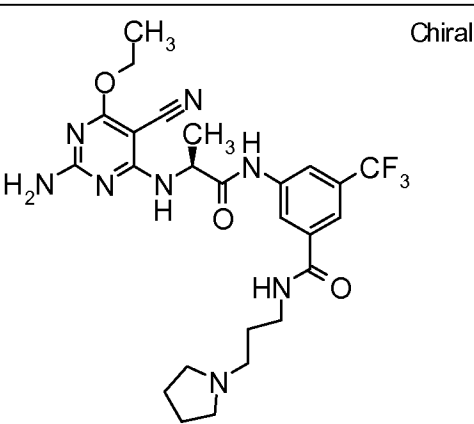
Entry	Name	Structure
156	N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N~6~,N~6~-dimethyl-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	
157	N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-[(4-methylpiperazin-1-yl)carbonyl]-5-(trifluoromethyl)phenyl]-L-alanineamide	
158	3-({N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)-N-(3-pyrrolidin-1-ylpropyl)-5-(trifluoromethyl)benzamide	

Table 1

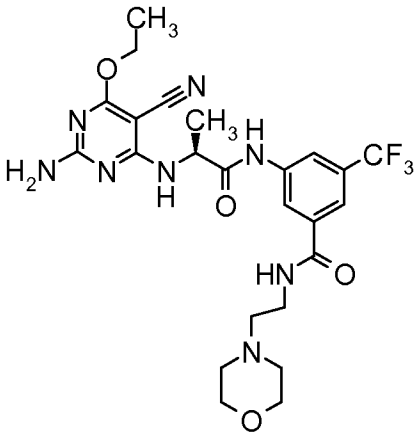
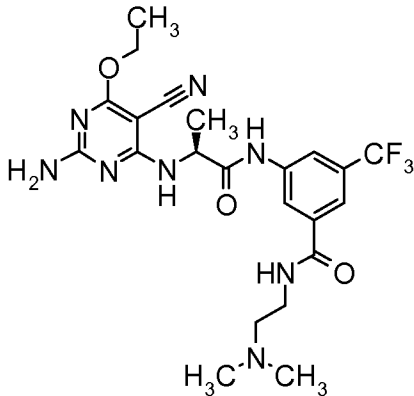
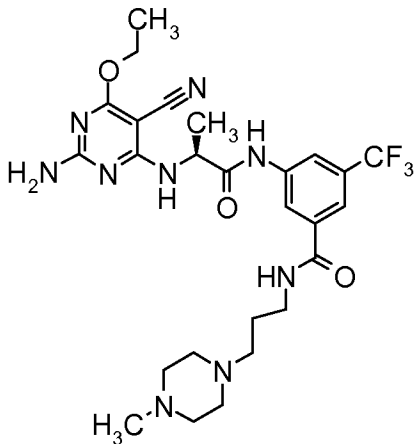
Entry	Name	Structure
159	3-({N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)-N-(2-morpholin-4-ylethyl)-5-(trifluoromethyl)benzamide	<div>  <p>Chiral</p> </div>
160	3-({N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	<div>  <p>Chiral</p> </div>
161	3-({N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)-N-[3-(4-methylpiperazin-1-yl)propyl]-5-(trifluoromethyl)benzamide	<div>  <p>Chiral</p> </div>

Table 1

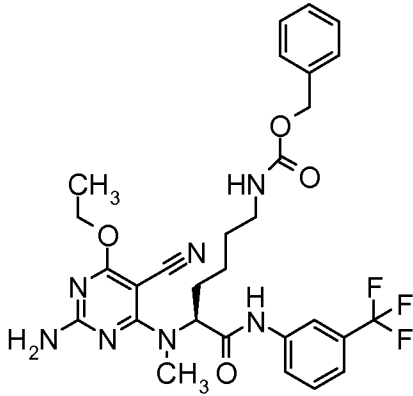
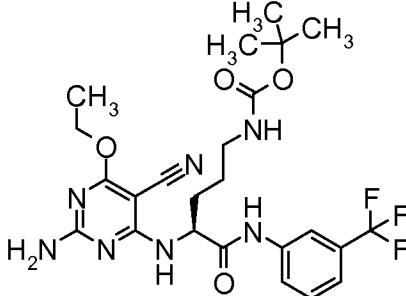
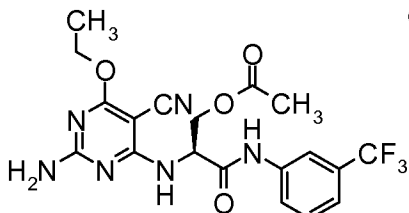
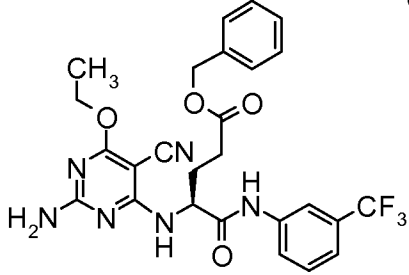
Entry	Name	Structure
162	N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N~2~-methyl-N~6~-{[(phenylmethyl)oxy]carbonyl}-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	
163	1,1-dimethylethyl ((4S)-4-{[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino}-5-oxo-5-{[3-(trifluoromethyl)phenyl]amino}pentyl)carbamate	
164	(2S)-2-{[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino}-3-oxo-3-{[3-(trifluoromethyl)phenyl]amino}propyl acetate	
165	phenylmethyl N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	

Table 1

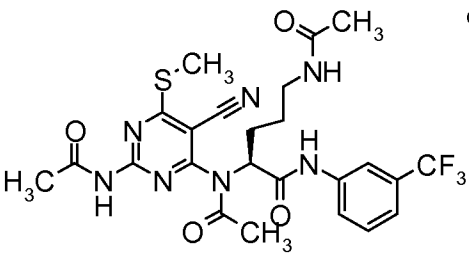
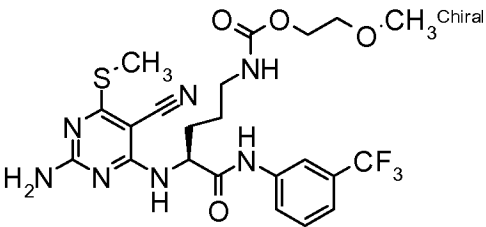
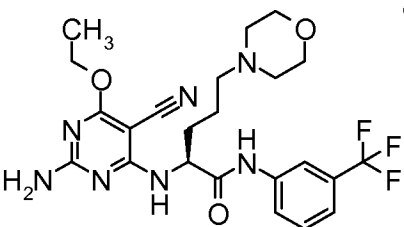
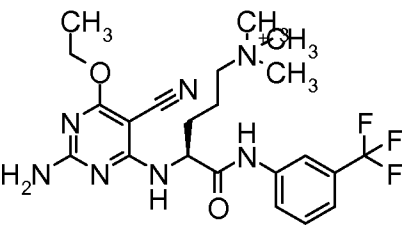
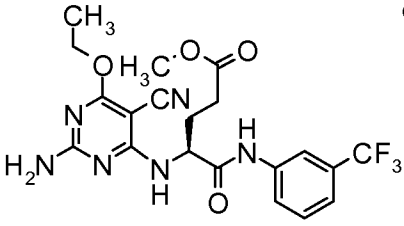
Entry	Name	Structure
166	N~2~,N~5~-diacetyl-N~2~-[2-(acetylamino)-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
167	2-(methyloxy)ethyl ((4S)-4-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino]-5-oxo-5-[[3-(trifluoromethyl)phenyl]amino]pentyl)carbamate	
168	N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-5-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-norvalinamide	
169	N-((4S)-4-[[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino]-5-oxo-5-[[3-(trifluoromethyl)phenyl]amino]pentyl)-N,N-dimethylmethanaminium	
170	Methyl N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	

Table 1

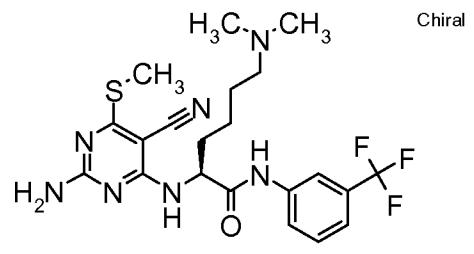
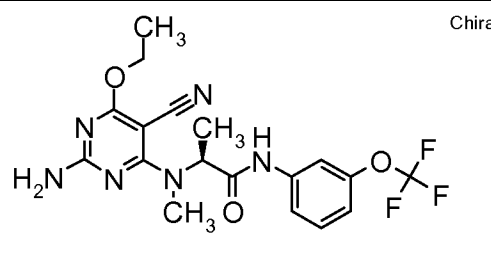
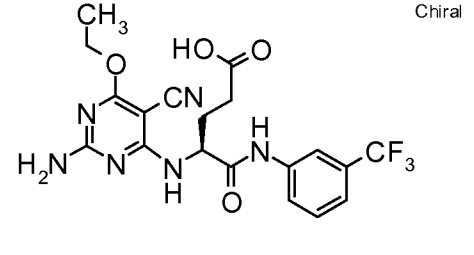
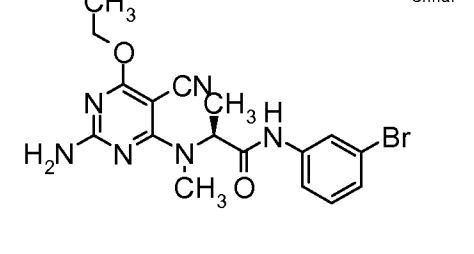
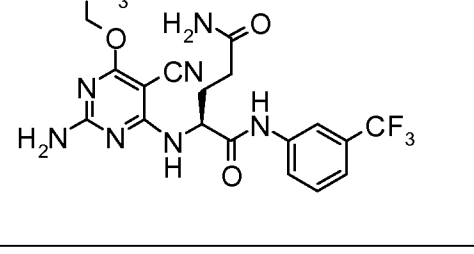
Entry	Name	Structure
171	N~2~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N~6~,N~6~-dimethyl-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	
172	N~2~-{2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl}-N~2~-methyl-N-{3-[(trifluoromethoxy)phenyl]}-L-alanineamide	
173	N~2~-{2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl}-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamine	
174	N~2~-{2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl}-N-(3-bromophenyl)-N~2~-methyl-L-alanineamide	
175	N~2~-{2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl}-N~1~-{3-(trifluoromethyl)phenyl}-L-glutamineamide	

Table 1

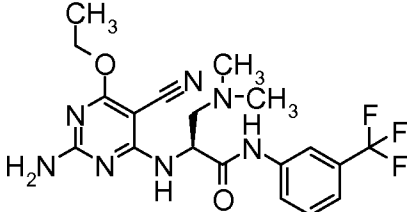
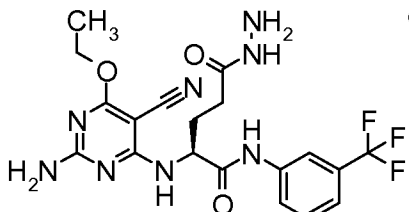
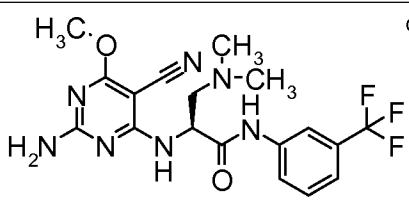
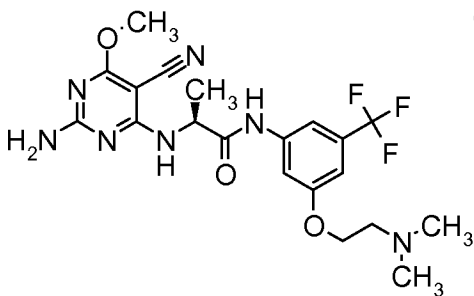
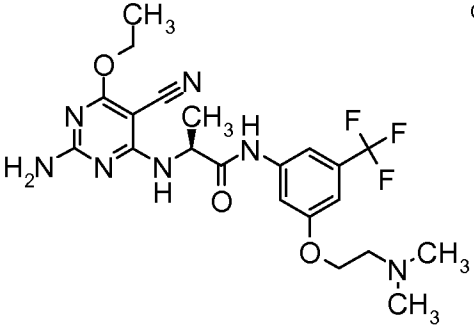
Entry	Name	Structure
176	N~2~-2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]-3-(dimethylamino)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	 <p>Chiral</p>
177	'2-(2-amino-5-cyano-6-ethoxy-pyrimidin-4-ylamino)-4-hydrazinocarbonyl-N-(3-trifluoromethyl-phenyl)-butyramide	 <p>Chiral</p>
178	N~2~-2-amino-5-cyano-6-(methoxy)pyrimidin-4-yl]-3-(dimethylamino)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	 <p>Chiral</p>
179	N~2~-2-amino-5-cyano-6-(methoxy)pyrimidin-4-yl]-N-[3-([2-(dimethylamino)ethyl]oxy)-5-(trifluoromethyl)phenyl]-L-alaninamide	 <p>Chiral</p>
180	N~2~-2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]-N-[3-([2-(dimethylamino)ethyl]oxy)-5-(trifluoromethyl)phenyl]-L-alaninamide	 <p>Chiral</p>

Table 1

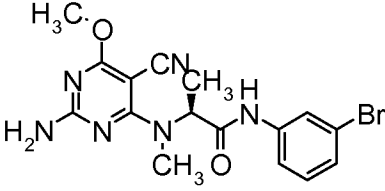
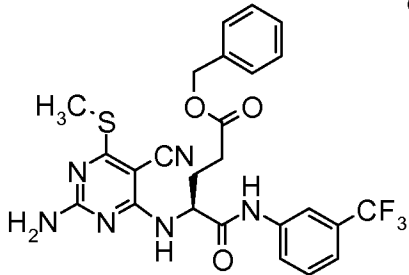
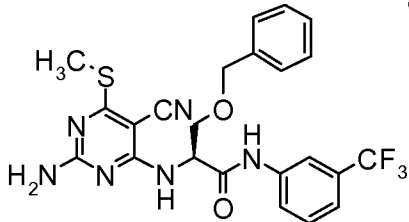
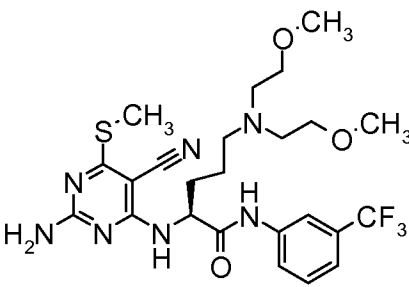
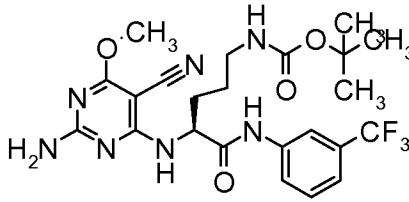
Entry	Name	Structure
181	N~2~- [2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N-(3-bromophenyl)-N~2~-methyl-L-alaninamide	
182	phenylmethyl N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	
183	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-O-(phenylmethyl)-N-[3-(trifluoromethyl)phenyl]-L-serinamide	
184	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~5~,N~5~-bis[2-(methyloxy)ethyl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
185	1,1-dimethylethyl ((4S)-4-{[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]amino}-5-oxo-5-{[3-(trifluoromethyl)phenyl]amino}pentyl)carbamate	

Table 1

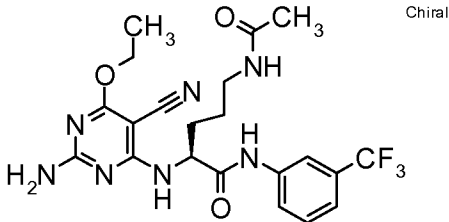
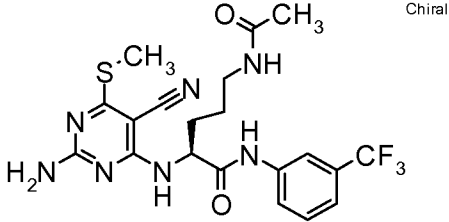
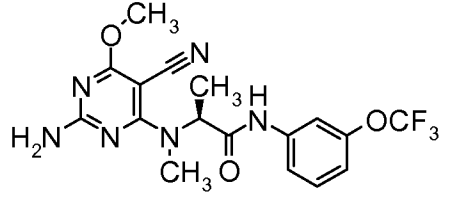
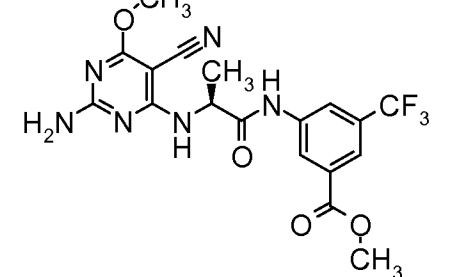
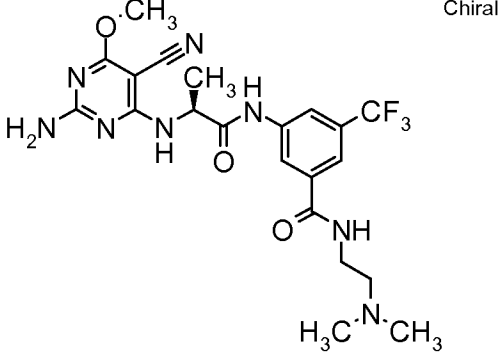
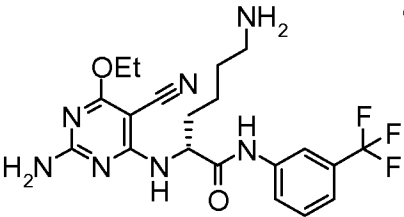
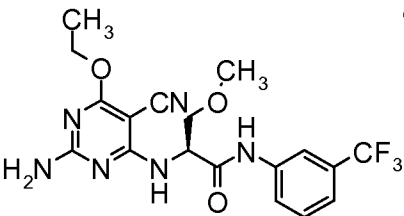
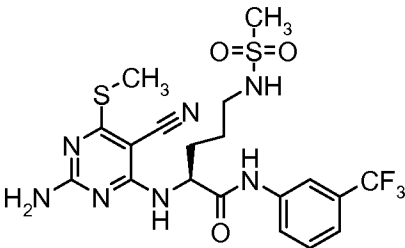
Entry	Name	Structure
186	N~5~-acetyl-N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
187	N~5~-acetyl-N~2~-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
188	N~2~-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N~2~-methyl-N-[3-[(trifluoromethyl)oxy]phenyl]-L-alaninamide	
189	methyl 3-({N-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-L-alanyl}amino)-5-(trifluoromethyl)benzoate	
190	3-({N-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-L-alanyl}amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	

Table 1

Entry	Name	Structure
191	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-3-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
192	N~2~- [2-amino-5-cyano-6-(methoxy)pyrimidin-4-yl]-3-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
193	N~2~- [2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]-3-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
194	N~5~- (aminocarbonyl)-N~2~- [2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
195	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-D-lysynamide	

Table 1

Entry	Name	Structure
196	N~2~- [2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-D-lysineamide	
197	N~2~- [2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-O-methyl-N-[3-(trifluoromethyl)phenyl]-L-serineamide	
198	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~5~- (methylsulfonyl)-N-[3-(trifluoromethyl)phenyl]-L-ornithineamide	

[0056] Embodiment [0056]: Another aspect of the invention is a pharmaceutical composition comprising the compound according to any one of Embodiments paragraphs [0022]-[0055] and a pharmaceutically acceptable carrier.

[0057] Embodiment [0057]: Another aspect of the invention is a metabolite of the compound or the pharmaceutical composition according to any one of Embodiments paragraphs [0022]-[0056].

[0058] Embodiment [0058]: Another aspect of the invention is a method of modulating the *in vivo* activity of a kinase, the method comprising administering to a subject an effective amount of a composition comprising at least one of: the compound according to any of Embodiments paragraphs [0022]-[0055], the pharmaceutical composition according to Embodiment paragraph

[0056], a compound explicitly provided against in ~~Embodiment paragraph~~[0022] or [0042], and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in ~~Embodiment paragraph~~[0022] or [0042] and a pharmaceutically acceptable carrier.

[0059] Embodiment [0059]: Another aspect of the invention is the method according to ~~Embodiment paragraph~~[0058], wherein the kinase is p70S6K.

[0060] Embodiment [0060]: Another aspect of the invention is the method according to ~~Embodiment paragraph~~[0059], wherein modulating the *in vivo* activity of p70S6K comprises inhibition of p70S6K.

[0061] Embodiment [0061]: Another aspect of the invention is a method of treating diseases or disorders associated with uncontrolled, abnormal, and/or unwanted cellular activities, the method comprising administering, to a mammal in need thereof, a therapeutically effective amount of a composition comprising at least one of: the compound according to any of ~~Embodiments paragraphs~~[0022]-[0055], the pharmaceutical composition according to ~~Embodiment paragraph~~[0056], a compound, the composition of which was, explicitly provided against in ~~Embodiment paragraph~~[0022] or [0042], and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in ~~Embodiment paragraph~~[0022] or [0042] and a pharmaceutically acceptable carrier.

[0062] Embodiment [0062]: Another aspect of the invention is a method of screening for modulator of a p70S6K kinase, the method comprising combining either a compound according to any one of ~~Embodiments paragraphs~~[0022]-[0055] or a compound, the composition of which was, explicitly provided against in ~~Embodiment paragraph~~[0022] or [0042], and at least one candidate agent and determining the effect of the candidate agent on the activity of said kinase.

[0063] Embodiment [0063]: Another aspect of the invention is a method of inhibiting proliferative activity in a cell, the method comprising administering an effective amount of: the compound according to any of ~~Embodiments paragraphs~~[0022]-[0055], the pharmaceutical composition according to ~~Embodiment paragraph~~[0056], a compound, the composition of which was, explicitly provided against in ~~Embodiment paragraph~~[0022] or [0042], and a pharmaceutical composition comprising a compound, the composition of which was, explicitly

provided against in Embodiment paragraph—[0022] or [0042] and a pharmaceutically acceptable carrier.

[0064] Embodiment [0064]: Another aspect of the invention is a method of inhibiting abnormal metabolic activity in a cell, the method comprising administering an effective amount of: the compound according to any of Embodiments paragraphs—[0022]-[0055], the pharmaceutical composition according to Embodiment paragraph—[0056], a compound, the composition of which was, explicitly provided against in Embodiment paragraph—[0022] or [0042], and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in Embodiment paragraph—[0022] or [0042] and a pharmaceutically acceptable carrier.